

Food of the Barn Owl on Grand Cayman, B. W. I.

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DESPITE the wide distribution of the Barn Owl (*Tyto alba*) in the West Indies, its breeding and feeding habits are poorly documented for specific islands. The most complete accounts of foods are from fossil and subfossil cave deposits in Jamaica (Williams, 1952) and from numerous contemporary sites on Hispaniola (Wetmore and Swales, 1931). On Grand Cayman, an island of 71 square miles and 180 miles south of Cuba, the Barn Owl has been known as a resident since the earliest ornithological explorations in 1886, yet prior to this paper neither nesting sites nor foods have been reported for the island. The present brief account is ecologically significant because this owl is the island's sole resident avian predator. Furthermore, the mammalian fauna, part of the owl's diet, is poorly known.

One nest site, located inside an abandoned boat at the edge of North Sound, was examined on 18 December 1970. In January 1970 it contained a single egg that subsequently disappeared. This site must have been used previously because the wooden floors nearby were paved with bones, chiefly those of *Rattus rattus* and *Mus musculus*. Also present were remains of a single hermit crab (Paguridae) and the mandible of *Elaenia martinica*.

Near Savannah, on the south end of the island, an active nest was located on 19 December 1970. It was in a deep hollow of an old mango tree (*Mangifera indica*) and contained three downy young. Beneath neighboring mango trees were fresh and broken owl pellets plus scattered bones. These included many skeletal parts from *Rattus rattus* (30 skulls) and *Mus musculus*, one skull each of *Rattus norvegicus*, *Aristelliger praesignis*, *Brachyphylla nana*, *Artibeus jamaicensis*, and an assortment of avian bones. The latter belonged to *Leucophoyx thula*, *Quiscalus niger*, *Mimus polyglottos*, *Dumetella carolinensis*, *Dendroica* (probably *palmarum*), *Coereba flaveola*, and *Centurus superciliaris*. The avian remains constituted approximately 40 per cent of the identified food items.

The two bats (*Brachyphylla* and *Artibeus*) have not been previously reported from Grand Cayman (Hall and Kelson, 1959) although both Donald Buden (in 1970) and Albert Schwartz (in

1961) have collected *Artibeus* on the island. Buden also took *Brachyphylla* there in 1970. Miller (1902) recorded both of these bat species from Barn Owl pellets on Cuba.

Of ecological significance is the relatively high proportion of avian remains in the Cayman material. For numerous continental sites the Barn Owl is renowned for its concentration on rodent prey and for a low percentage (ca. 1 per cent) of avian prey (Wallace, 1948), but on islands birds may become more important or even exclusive food items (Howell, 1920). On Hispaniola in addition to rats, mice, lizards, bats and frogs, 29 species of birds were identified from Barn Owl pellets (Wetmore and Swales, 1931). It seems likely that on some islands, such as Grand Cayman where small mammal prey is reduced in diversity and total numbers, the Barn Owl becomes alternatively a significant predator of birds and other nonmammalian vertebrates.

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